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# PALMETTO AVIATION

Volume 46, Number 1

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## Astronaut Comes Home For Walkway Dedication

Space Shuttle Astronaut and U.S. Navy Capt. Frank L. Culbertson recently returned to Orangeburg to dedicate an aviators walkway at the Orangeburg Municipal Airport.

Culbertson, formerly of Holly Hill, highlighted the ceremony with his insight into aviation and his experiences as a pilot and astronaut.

"You feel the power behind you. I love going fast, even if it is upside-down," he said talking of his Space Shuttle Discovery mission.

About 300 people gathered to hear Culbertson talk about his space missions and growing up in Orangeburg County. The 44-year-old astronaut said he was the same as any other pilot in the country, but he "had gone a little farther, a little faster" than most.

The Orangeburg Pilots' Walk and Memorial was officially dedicated on December 17 at 10:35 a.m. Exactly 90 years to the time and date of the first powered flight by Orville and Wilbur Wright in 1903 at Kitty Hawk.

According to John Baxley, architect of the walkway, the memorial originated from a need to bring attention to the important contributions aviation has made to the Orangeburg area and as a way to preserve the rich aviation heritage of the



Astronaut Frank Culbertson presents a special Space Shuttle picture to the Orangeburg Airport Commission during the Aviation Memorial ceremony.

community.

Detailing aviation's milestones with granite bricks, the walkway is 120 feet long, the same distance as the first powered

*See Orangeburg Walkway, Page 6*

## East Cooper Airport wins Environmental Award

East Cooper Airport located near Mount Pleasant was awarded the Federal Aviation Administration's highest environmental award for its Wetlands Mitigation Plan.

"This program was begun in 1991 and East Cooper Airport is the first general aviation airport to receive this prestigious award," said Jackie Sweatt, Environmental Protection Program Manager for the FAA's Southern Re-

gion.

East Cooper Airport "received this award for constructing and operating the airport in a manner that contributes to the enhancement and preservation of the natural environment," Sweatt said during the presentation.

"The FAA is very conscious of the need to adapt airports to their existing environments and we feel that it is impor-

*See East Cooper Airport, Page 6*



Jackie Sweatt (l) of the FAA presents David Jennings of the Charleston Aviation Authority the Environmental Award for East Cooper.





**PALMETTO AVIATION** is an official publication of the South Carolina Department of Commerce, Division of Aeronautics. It is designed to inform members of the aviation community, and others interested in aviation, of developments in aviation and aviation facilities, and to keep readers abreast of state, national and international trends in aviation.

The Division of Aeronautics is a state agency created in 1935 by the South Carolina General Assembly to foster and promote air commerce in the state.

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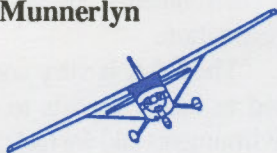
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## From the Director's Desk

### *Aeronautics is Part of the A-Team*

Most people know aviation is a vital piece of the transportation puzzle that keeps South Carolina moving smoothly. After all, our state boasts some 67 public-use facilities. But how many of these same people acknowledge the economic importance of aviation?

Including military operations, aviation is a billion dollar industry in South Carolina. Aviation provides more than \$345 million in annual wages for the state's residents, and the state's six commercial airports contribute more than \$824.8 million to the economy.

By its nature, aviation is inherently tied to the economic development of the state, and that is why we are pleased to be included in the newly created Department of Commerce.

As a result of government restructuring, the South Carolina Aeronautics Commission has ceased to exist, and in its place the Division of Aeronautics as part of the Department of Commerce was formed.

With consolidation, the Division of Aeronautics gets a little closer to performing its true function of enhancing the economy through aviation development.

In his January address to the Department of Commerce, Secretary John Warren welcomed the merging agencies of the State Development Board, the Aeronautics Commission, the Coordinating Council for Economic Development, Public Railways Commission and Savannah Valley Authority.

Any high school football team will admit teamwork is the most vital component to winning, and the new Division of Aeronautics will make every effort to

be a valuable team player.

Our biggest challenge is to keep aviation awareness in the forefront as it is sometimes neglected for more visible and obvious needs of our everyday routine.

We don't have to go far or look very hard to know that aviation is as important to businesses as the location of the nearest highway.

One of the largest industries to ever locate in the state, BMW, admitted that being next to an accessible airport for high priority inventory was one of the keys to coming to South Carolina.

As a former small business owner and an elected official, I know how important it is to bring additional revenue to the state, and by merging aviation with commerce everyone will benefit.

Aviation is the real winner in the Department of Commerce.

Now when industry wants to locate in the state, aviation will be a vital part and included into the economic development plan, providing businesses with another reason to build in our state and another reason to improve air facilities.

Fostering air transportation will be a way to lure more economic development to the state and aviation won't be a neglected piece of the puzzle as it once was.

Now Aeronautics will be on the A-Team.



**Saleeby**

South Carolina Division of Aeronautics Offices are at Columbia Metropolitan Airport. Mailing Address: P.O. Drawer 280068, Columbia, SC 29228-0068. Phone (803) 822-5400 or 1-800-922-0574.



## 90th Anniversary of Wright Brothers Celebrates Flight

The 90th Anniversary of the Wright Brothers' flight was marked by ceremonies at the Wright Brothers National Memorial in North Carolina, activities in Dayton, Ohio, the Wright Brothers hometown and by a special presentation at the Wright Memorial Dinner in Washington, D.C.

December 17 is a date most aviators will recognize as the day Orville and Wilbur Wright made history at Kitty

Hawk with their first powered flight.

A ceremonial flight by AOPA spanned more than 1,000 miles to link the ceremonies.

AOPA president Phil Boyer dedicated two new replica Wright Brothers hangars at the first site on the Outer Banks of North Carolina, then flew ceremonial telegrams and Wright memorabilia from the Smithsonian Institution to the Wright Day luncheon in Dayton.

## Annual Warbirds Banquet To Induct Former Governor

Besides being pilots, Robert Morgan, Ensign George Gay, Gen. Robert Scott, Gen. Paul Tibbets and Col. Francis Gabreski, have been inducted as "Warbird of the Year."

This year, the Warbirds will be adding Joe Foss to its list on February 18 at the Spartanburg Quality Inn at I-85 and U.S. 176.

Foss is a Marine pilot and Congressional Medal of Honor recipient who has subsequently served in the South Dakota legislature and as the state's governor for two terms. In aviation circles, Foss is most often noted for his flying a WWII fighter, the Grumman F-4F Wildcat, operating from Henderson Field, Guadalcanal. He was the first WWII



Joe Foss

pilot to match Eddie Rickenbaker's 26 victories in WWI.

Past "Warbirds of the Year" are slated to attend the banquet as well as Lt. Gov. Nick Theodore who will make a special presentation.

For more information call Bill Hope at (803) 585-1414 or Hubert Hendrix at 576-3633.

## 1994 Breakfast Club Officers

The members of the South Carolina Breakfast Club recently named the 1994 officers:

President, Gerald Ballard  
Upper State Vice Pres., L.W. Bobo  
Mid State Vice Pres, David Oswalt  
Lower State Vice President,  
Rudy Branham  
Secretary, Anne Hawkins  
Historian, Bill Hawkins

The S.C. Breakfast Club is one of the oldest continuing flying organizations in the United States, and holds breakfasts about every two weeks.

If you would like more information regarding the club or to schedule a breakfast at your airport, please call Anne Hawkins at (803) 432-9595, or Gerald Ballard at (803) 663-9900.



## Aviation Calendar

**February 6**  
Breakfast Club  
Eagle Aviation  
Columbia Metro Airport  
Columbia, SC

**February 18**  
**Warbird of the Year Banquet**  
Quality Inn Conference Center  
at I-85 & US 176  
7 p.m.

**February 20**  
Breakfast Club  
Rudy Branham Field  
Darlington, SC

**March 6**  
Breakfast Club  
S.C. Division of Aeronautics  
Wilder Hangar Facility  
Columbia Metro Airport

**March 20**  
Breakfast Club  
Dillon County Airport

**April 3**  
Breakfast Club  
Timmonsville Airport

**April 17**  
Brockston Bridge  
Plantation  
Radial Section  
116.7  
From Allendale



**May 1**  
**Open House**  
**McEntire ANG**  
**Thunderbirds &**  
**Golden Knights**



## FAA Holds Meeting on Parasails & Banner Planes

Safety has been a problem with parasail operators and banner towing planes, according to the FAA which held a special meeting in Myrtle Beach in late January.

FAA safety officials told banner plane and parasail operators that better communications and stricter regulations would be needed so the two could co-

exist. FAA regulations state that parasails can not operate within a five-mile radius of an airport. That means the only area they would be allowed to fly unregulated is a three-mile stretch between the Myrtle Beach Jetport and the Grand Strand Airport, according to the FAA.

David Anderson, an FAA Safety Inspector, said the FAA will enforce the

five-mile rule and will require parasails who operate in the area to have a waiver.

Banner planes, according to the FAA, are required to fly at least 500 feet away from boats, including parasail operations when they are farther than 2,000 feet from shore. There are about a half-dozen parasail operators along the Grand Strand, according to the FAA.

### Hawthorne Aviation Adds Services

Hawthorne Aviation, based in Charleston, S.C., has been selected to provide general aviation and air-line fueling and handling services at Allentown-Bethlehem-Easton International Airport in Pennsylvania.

Hawthorne will take over a general aviation terminal and hangar complex.

## McEntire ANG to hold Open House

The South Carolina Air National Guard will be hosting an Open House and Air Show May 1, at McEntire Air National Guard Base located on Hwy 76/378 15 miles east of Columbia.

The South Carolina Guard is holding the open house to give people a chance to see the military capabilities and equipment from all services and our allies.

One of the scheduled highlights will be the appearance of the U.S. Air Force Thunderbirds, and the U.S. Army Para-

chute Team, the Golden Knights.

In addition, there will be numerous static displays, aerial demonstrations and a simulated attack on the field.

The 1994 Open House and Air Show should be one not to miss, besides there's no charge for general admission.

## AOPA Membership Increases to 321,000

The Aircraft Owners and Pilots Association ended the year with a record membership of 321,300, the highest number of new members since 1989.

More than 87 percent of AOPA members renewed memberships, while 56,156 pilots joined the association in 1993.

Even though there is a shrinking pilot population, AOPA enjoyed a net membership increase of near 20,000.

"While fighting 1993's battles, we remained true to our goal to make flying safer, more affordable and more fun," said Phil Boyer, AOPA president.

The increasing costs associated with flying was AOPA's main focus in 1993. Last year, AOPA aided in the defeat of some \$300 million in federal aircraft registration fees and general aviation-specific new taxes.

In addition, AOPA has advocated

more product liability reform and helped in convincing the FAA to withdraw the requirement for Mode S transponders.

Late in the year, the organization worked with U.S. and Mexican officials to reduce increases in Mexican air traffic fees on light aircraft.

AOPA has also demonstrated the potential of the Global Positioning System by providing FAA flight tests.

Other areas AOPA has become involved with included the successful appeal to Congress to restore 1994 funding for DUATS computer weather briefings. New four-color IFR charts resulted from an AOPA suggestion to an FAA working group, and both WAC charts and Gulf Coast VFR charts were saved from the budget axe.

AOPA's annual convention, AOPA Expo, broke all-time attendance records with more than 7,200 participating.

## Rites Held for Walter, Will Carson

Services for Walter Sullivan Carson and his son, William Raymond, were held recently at Do-Little Field near St. Matthews.

Walter Carson, 39, was the son of Dr. Raymond P. and Ruth Carson. He was a graduate of the University of South Carolina and an electrical engineer with Johnson Controls. He was an officer in the Experimental Aircraft Association Chapter 242, a certified airplane mechanic and a member of Virginia Wingard United Methodist Church. He was a former president of the S.C. Breakfast Club and had won many awards for his aircraft restorations.

William Raymond Carson, 5, was a student at H.B. Rhame Elementary School in Columbia.

Surviving are Walter Carson's wife, Terry; a daughter, Emily; Walter Carson's parents, Dr. Raymond and Ruth Carson.

Memorials may be made to Riverbanks Zoo, Columbia, SC.



## Profiles in Aviation

### *A Small Town Boy With Big Accomplishments: Robert Walker*

Many pilots say their lives revolved around watching airplanes fly into the small local airport.

But for other aviators it was an unlikely event that somehow transformed their lives into becoming a pilot. Representative Robert Walker is one of those pilots. For him, it was a simple military training exam that opened the possibility of becoming a pilot.

While he was in the University of South Carolina ROTC program, the Landrum representative was exposed to many different military programs and during testing showed an aptitude for aviation.

"Before I started flying, I don't recall having any big ideas about aviation. I know that I had never been in an airplane until I started training in February 1964. After I got started, I found that being a pilot was something I really loved."

Walker received his private pilot's license in 1965 from two of the state's most famous teachers, Frances Miller and Sylvia Roth who were doing the contract training for the Air Force.

Asked if Miller and Roth were hard on him, Walker said laughing, "Everything was tough for me. I was just a farm boy learning how to fly an airplane. I'd never even seen a piece of equipment like that before."

In 1965, Walker entered the Air Force as a Second Lieutenant and was sent to Craig Air Force Base in Alabama for pilot training.

"I graduated fifth in my class of about 34," he said. "I stayed at Craig as an instructor pilot and began flying the new supersonic T-38's. That was a major adjustment, but a thrilling experience."

The 51-year-old representative married his high school sweetheart, Martha, after pilot training and stayed at Craig AFB for five years.

During this time Walker earned his commercial pilot rating, an instrument rating, a multi-engine jet rating and accu-



**Representative Robert Walker checks over his log book at his legislative office.**

mulated over 2000 hours of jet flying time.

"My intention when I got out of the military in 1970 was to go to the airlines. The year before, the airlines had hired everybody who had gotten out of the service. Then in 1970, they quit hiring. I came back to South Carolina and went to work in the textile industry. Delta Airlines called me for an interview, but I made the decision not to pursue it."

Several years later, Walker bought into an insurance and real estate business in Landrum, his hometown, and has operated a successful business there ever since. About six years ago his interest in aviation was rekindled, and soon thereafter he bought a Cherokee 235.

He enjoys flying in and out of the Fairview Airport with his fellow Crosswind Pilots Club members.

"Our son, Greg, finished Auburn University in Aerospace Engineering, went to pilot school in Columbus, Mississippi, and now he is a C-130 pilot in Little Rock, Arkansas. So flying," he added, "is pretty much in our family."

Seeing his son through pilot training was one of Walker's finest hours. "I kept all my records of when I started pilot training and it's amazing," he grinned. "Greg started in April and I did, too. So it was the same graduating class, only 27

years later.

"Of course, he made better grades than his dad did, but I soloed before he did." The friendly competition culminated when his son finished fifth in his class, the same rank as his father.

The Spartanburg County representative admitted, "I'm a small town type person. I don't care for the traffic and noise of the big towns. I enjoy the slow pace of a small town like Landrum.

His Cherokee fits in well with his lifestyle. He can fly to Columbia for the legislative session and return home for the Lions Club meetings he so enjoys. The plane is also helpful in visiting his son's family where ever he is stationed in the Air Force.

Flying has influenced different parts of Walker's life. "I don't think there is any question about it...I remember so many times when you're at 40,000 ft. in a jet or at night when you're looking at the world...Aviation gives you an appreciation of what's around you --the beauty of this country, the freedoms we have, and the ability to succeed."

Walker is not the kind of man who would boast of his skills. But rather he is somewhat awed that this self-described "small town country boy" has been able to experience such a varied life as he has.

His legislative service reflects the same discipline learned in pilots school with great emphasis on education and training.

"You never really know what you can accomplish," he said. "And the flying, I just love to go and fly, just to enjoy the solitude, the beauty, and the ability to observe things around you."

For now Walker seems content to continue on the legislative track, but hesitates about future goals.

"I guess my one goal is to get a ride in an F-15 or F-16...I'd like to experience the new fighter planes and compare it to what we had. That would be something."

For one small town farm boy, it would be very sweet, indeed.



## Orangeburg Pilots' Walkway Dedicated

Continued from Page 1

flight. The U.S. flag and the state flag are separated by 56 feet, the number of years between the opening of the Orangeburg Municipal Airport and the dedication of the memorial. Between the two flags is space for more than 300 stones designed for pilots' names.

One South Carolina flag, a gift from Culbertson, went into space with him on the Space Shuttle Discovery in September.

Also during the ceremony, Culbertson gave a special picture of the Discovery which included a mission patch and other memorabilia which will be displayed at the Orangeburg Airport terminal.

With his parent's by his side, Frank Culbertson spoke in detail on what it is like to fly in the Discovery and how his hometown prepared him for the challenges of astronaut life. He acknowledged his parents at one point crediting them with the ability to never let him lose sight of his dream of being an astronaut, even though at times the odds seemed against him.

Culbertson seemed impressed that so many would turn out for the ceremony and spent the better part of an hour signing programs, posing for photographs and talking to old friends and admirers.

Pilots who have had an interest in

### Time Capsule To Be Buried

A time capsule for the Aviation Memorial will be buried on April 10, 1994. The capsule will be opened on the 150th anniversary of the Kitty Hawk flight, December 17, 2053.

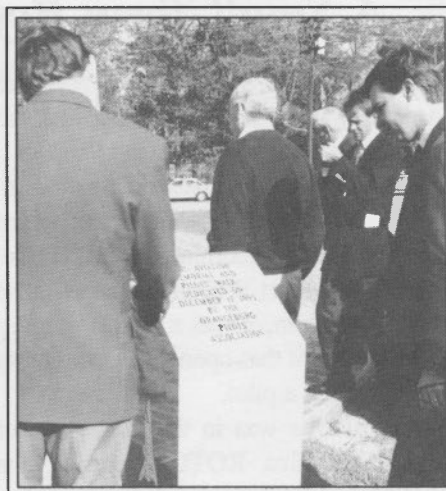
Anyone wishing to donate aviation related items for enclosure should contact John Baxley at Orangeburg Municipal Airport, before March 1.

Orangeburg Aviation during the past 56 years have a chance to purchase an engraved granite stone for the walkway. Each pilot will have their name and certificate number engraved in the 4x8-inch Elberton granite stone.

Inside the terminal building, a computer with a viewing screen will be available for visitors.

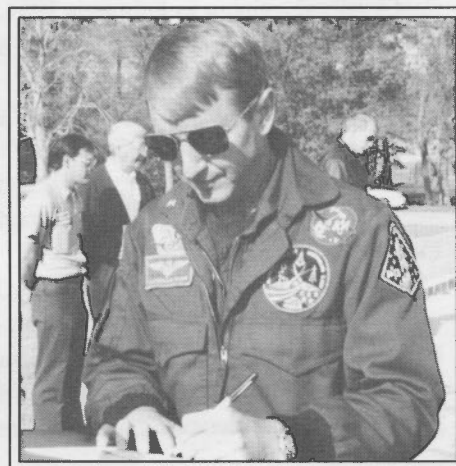
Access to specific information about aviation in South Carolina, local aviation milestones, and general aviation history will be available.

Also, entries about each pilot represented in the walkway will be on hand, as well as, facts about the Breakfast Club and Hawthorne School of Aviation which both originated in Orangeburg.



Above, visitors read the granite markers following the ceremony.

Below, Holly Hill native and astronaut, Frank Culbertson signed autographs for more than an hour after the presentation.



East Cooper Airport maintains wetlands mitigation program.

## East Cooper Airport Receives FAA Award

Continued from Page 1

tant to recognize airport owners who share these values and put them into action," she added.

The East Cooper Airport is owned and operated by the Charleston County Aviation Authority. David Jennings, chairman of the Authority, said the Lowcountry is a unique area in which to live and the Authority is dedicated to preserving its natural environment.

East Cooper Airport was opened in 1987, and replaced the Isle of Palms

Airport which previously served the aviation needs of the East Cooper area. In addition, East Cooper's single 3,700 foot runway provides access to visitors with direct access to popular resort areas in the area and acts as a reliever airport for Charleston International Airport.

The Charleston Aviation Authority maintains the East Cooper Airport, Charleston Executive Airport (Johns Island), and Charleston International Airport.



## FYI from the FAA

*Time in Your Tanks -- It May Save Your Life*

The following article is from FAA's Accident Prevention Program which is designed to provide the flying public with safety information that is handy and easy to review.

How to Determine Time in Your Tanks

Maintain accurate flight time, power setting, and refueling records for each trip.

Be conservative, figure your flight time from start up to shut down.

Reasonable accurate fuel consumption rates (in gallons per hour) can be computed after a few flights under similar operating conditions.

The amount of usable fuel for your aircraft may be found in the **Pilots Operating Handbook**.

Multiply the usable fuel on board your aircraft by 75 percent and divide the result by your previously confirmed consumption rate. This will be your **SAFE FLIGHT TIME** limit for the aircraft. Resolve never to exceed it.

When you are familiar enough with your aircraft to know exactly how much time is in your tanks, plan to land with at least 45 minutes of reserve fuel on board. Anything less could compromise safety.

Other Tips On Fuel Management

Compute a reasonable time limit for your aircraft.

Factors to be considered in planning each flight:

Trip length

Cruise altitude

Wind -- don't count forecast tailwinds, they can change

The number of passenger (weight plus baggage)

Inflight endurance of persons on board

Resolve not to exceed the time limit you establish

Estimate your "ETA" for each checkpoint.

Be aware of your actual progress and think about landing at an alternate if you are running behind your estimated "ETA".

Use the grade of aviation gasoline speci-

fied by the manufacturer for your aircraft.

Use the next higher grade when the specified grade is not available. Never use automotive gasoline or aviation gasoline of lesser grade than that specified by the engine manufacturer.

Visually check the color and cleanliness of the fuel in your aircraft by draining the fuel sumps and strainers after each fueling and during preflight inspection.

**Remember -- A Tank Full of Fuel  
is Only A Tank Full of Time**

Do not assume your fuel quantity and quality to be correct. Check it.

Know the fuel system of your aircraft and never operate a system selector without visually checking the position.

Fuel gauges are subject to malfunctions and errors. Therefore, unless restricted by the gross weight or center of gravity limits, it is considered good judgment to "top off" the tanks at fuel stops.

If the fuel load must be limited, an accurate measurement can be made by use of a dipstick calibrated by condensation. Do not reposition the fuel selector just before takeoff or landing.

Know why you should lean the fuel mixture:

To improve engine efficiency and in-

crease airspeed. To provide smoother engine operation.

To provide greater fuel economy and longer range of operation -- that's a safety factor. To provide longer spark plug life with less fouling.

To reduce maintenance costs.

Know when you should lean the fuel mixture:

Normally aspirated engines:

Lean anytime the setting is 75 percent or less. Use full rich for full throttle operation at 5,000 feet density altitude and below.

Turbo-charged engines:

Always use full rich for takeoff regardless of altitude.

Lean at cruise as recommended by the manufacturer only.

Know how to adjust mixture setting for high altitude takeoff and landing.

Lean to maximum RPM for carburetor engines.

Lean to proper fuel flow and fuel pressure settings for injected engines.

Lean before entering the traffic pattern to ensure maximum power for go around.

Enrich the mixture for descent as required **ONLY**.

Enrich enough to keep the engine running smoothly.

Go to full rich when in the traffic pattern (or as required when landing at high elevations).

## *Aviation Fuels: Confusing the Colors*

The following NOTAM is provided for your information. The aviation community should be notified of the potential problems in identifying aviation fuels.

Dyes are being added to certain U.S. produced diesel fuels and kerosene.

The diesel fuel sold in the United States has a color ranging from light yellow to dark red.

The addition of dye to most diesel fuels will cause a change in

color so that the fuel, after dye addition, will range from light green to blue to deep violet.

Because these fuels may look similar to aviation fuels, pilots, air carriers, fuel vendors, and others should be especially alert to ensure aircraft receive the appropriate fuel.

If any doubt exists regarding the accurate identification of fuel, it **SHOULD NOT** be dispensed into aircraft or into storage from which it could be dispensed into aircraft.





**SOUTH CAROLINA  
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**This Month....  
Inside Palmetto Aviation**

- Astronaut highlights Orangeburg Ceremonies
- East Cooper Airport wins FAA Award
- Warbirds to Honor Joe Foss

....and much, much more!!

***Aeronautics Personnel Receive Honors for Safety***



The S.C. Division of Aeronautics was awarded National Business Aircraft Association Safety Awards recently. At left, Neil Baker, Walter Johnson (c) and Mike Hugg (r) hold the NBAA Maintenance Award and the NBAA Corporate Business Flying Safety Award for flying 82,654 injury-free and accident-free hours.

Pictured right, Aeronautics staff hold NBAA individual safety awards for Aircraft Support Services and Aircraft Maintenance Services: (from left) Gerald Osborne, Tony Burgess, Paul Gravesandy, Larry Kennerly, and Neil Baker. Walter Johnson holds Andy Stafford's award.

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